Far Away, So Close

(2011) 2 *Climate Law* 85-115

Far away, so close: A legal analysis of the increasing interactions between the Convention on Biological Diversity and climate change law

Elisa Morgera*

It has become increasingly inaccurate to refer to a "mismatch" between biodiversity law and climate change law,[1] at least in as far as the Convention on Biological Diversity[2] is concerned. The legal and policy implications of the impacts of climate change on biodiversity, as well as of mitigation and adaptation measures, have been progressively addressed by the CBD. This process experienced a steep acceleration at the tenth meeting of the Conference of the Parties to the CBD (COP 10, held from 18 to 29 October 2010, in Nagoya, Japan)[3] that resulted in a host of unprecedented and far-reaching decisions related to climate change: most notably, CBD parties adopted a moratorium on geoengineering, set in motion a process for increased collaboration between the CBD and the international climate change regime, and in effect integrated climate change concerns into a multitude of thematic work programmes of the Convention.

Not only were the climate-change-related outcomes of COP 10 numerous, they were also amongst the most intensely negotiated ones, and they are amongst those that in many respects may significantly shape the future of the Convention. To assess these developments, this article will first discuss the increasing understanding of the links between global biodiversity loss and climate change, as well as the possible legal bases to support synergies between biodiversity law and climate change law. The central section of the article will analyse the main climate-change-related outcomes of COP 10. The article will conclude by discussing the legal relevance of the significant rapprochement of international biodiversity law and climate change law.

It should be emphasized at the outset that it is difficult to obtain a clear and comprehensive picture of the guidance given by the CBD's Conference of the Parties, as CBD guidance on climate change and biodiversity is dispersed throughout a myriad of (generally long) COP decisions; and within these decisions, relevant passages are not always well organized or clearly separated by topic or addressee. Frequent qualifications and convoluted drafting further undermine the comprehensibility of COP decisions and of their legal implications under the CBD.[4] While these formal

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* LL.M., Ph.D., Lecturer in European Environmental Law and Director of the LLM Programme in Global Environment and Climate Change Law, University of Edinburgh School of Law, UK. The author is very grateful to Annalisa Savaresi, Soledad Aguilar and the Editor for their invaluable comments on an early draft of this article, and to Jaimie Webbe (CBD Secretariat) and Kati Kulovesi for a stimulating exchange of ideas. The usual disclaimer applies. The author wishes to acknowledge that the title of this article was inspired by U2, Stay (Faraway, So Close!), Zooropa (1993).

[1] Arie Trouwborst, *International Nature Conservation Law and the Adaptation of Biodiversity to Climate Change: A Mismatch?*, 21 Journal of Environmental Law 419 (2009).

[2] Convention on Biological Diversity, opened for signature 5 June 1992, UNTS 1760 (entered into force 29 December 1993) [hereinafter, CBD].

[3] For an overview of the outcomes of the CBD COP 10, see Elisa Morgera, *CBD COP 10: Towards Post-2010 Implementation*, 40 Environmental Policy and Law 281 (2010).

[4] CBD parties have long complained of the convoluted, repetitious and disorderly style of drafting of the CBD COP decisions (see, for instance, Decision X/12 Ways and means to improve the effectiveness of

shortcomings undermine the chances of the CBD outcomes effectively reaching out to relevant (national and international) constituencies, particularly beyond the biodiversity community, the underlying objective of this article is to show that, on a substantive level, COP 10 has systematically identified concrete opportunities to inspire parties' initiatives at the national level, as well as international cooperation. This finding supports the secondary objective of this article, which is to encourage an in-depth engagement of environmental lawyers (particularly climate lawyers) in the legal analysis of CBD COP decisions and the national and international practice they generate, with a view to better understanding how the guidance agreed upon by the 193 CBD parties (representing nearly the whole international community, with the exception only of the United States, Andorra, and the Holy See) can contribute to achieving sustainable development through mutually supportive interpretations and applications[5] of climate law.

I. THE STATE OF PLAY

The need for synergies between the CBD and the international climate change regime has been discussed at the international level[6] and in scholarly debates,[7] especially since the early 2000s. Before presenting the developments that in 2010 paved the way for the adoption of COP 10's far-reaching decisions related to climate change, I will briefly discuss the linkages between the text of the two Conventions, as a basis of the legal analysis that follows.

1. Synergies based on the texts of the Conventions?

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the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA), CBD, para. 6 (2010) which reads: "*[the COP] requests* the Executive Secretary to streamline the texts of suggested draft recommendations for submission to the Subsidiary Body and *encourages* Parties to make these recommendations as short as possible so that the actions required are clear.") Note that SBSTTA recommendations form the basis of the majority of the CBD COP decisions, and that this problematic drafting practice is reflected across all the other sub-processes that contribute to formulating the rest of the CBD COP decisions.

[5] On the link between sustainable development and mutual supportiveness, see Riccardo Pavoni, *Mutual Supportiveness as a Principle of Interpretation and Law-Making: A Watershed for the WTO-and-Competing-Regimes Debate?*, 21 European Journal of International Law 649, at 662 (2010).

[6] See summary of early discussions on biodiversity and climate change in the context of the CBD in *Review of the interlinkages between biological diversity and climate change, and advice on the integration of biodiversity considerations into the implementation of the United Nations Framework Convention on Climate Change and its Kyoto Protocol*, UNEP/CBD/SBSTTA/9/11, CBD (2003).

[7] See, for instance, Meinhard Doelle, *Linking the Kyoto Protocol and Other Multilateral Environmental Agreements: From Fragmentation to Integration?*, 14 Journal of Environmental Law and Practice 75 (2004); Frédéric Jacquemont and Alejandro Caparrós, *The Convention on Biological Diversity and the Climate Change Convention 10 Years After Rio: Towards a synergy of the Two Regimes?* 11 RECIEL 169 (2002); and David Hodas, *Biodiversity and Climate Change Laws: A Failure to Communicate?*, 3rd Colloquium of the IUCN Academy of Environmental Law, Macquarie University, Sydney, Australia, 10-15 July 2005 (available online at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1549846). The latter provides a useful summary of the risks for biodiversity deriving from climate change based on *Report of the Ad Hoc Technical Expert Group on Biodiversity and Climate Change*, UNEP/CBD/SBSTTA/9/INF/12, CBD (2003).

While the CBD does not explicitly mention climate change, several of its provisions may be considered relevant to ensuring consistency between biodiversity law and climate law.[8] First of all, it has been argued that the language of the CBD preamble on anticipating, preventing, and attacking the causes of significant reduction or loss of biodiversity at source could be read as an implicit reference to climate change as a driver of biodiversity loss.[9]

In terms of action at the national and subnational level, the CBD could be interpreted as calling on parties to integrate biodiversity issues into climate change plans, programmes, and policies;[10] undertake environmental impact assessments of adaptation and mitigation projects that are likely to have significant adverse effects on biodiversity;[11] regulate climate-change-related processes and activities that have a significant adverse effect on biodiversity;[12] avoid or minimize adverse impacts from the use of biological resources for adaptation or mitigation purposes;[13] prevent the introduction of invasive alien species in the context of adaptation and mitigation measures;[14] bring about cooperation between national authorities and the private sector in ensuring the sustainable use of biodiversity for adaptation or mitigation purposes;[15] and provide incentives for the conservation and sustainable use of biodiversity components in the context of adaptation and mitigation activities.[16] Furthermore, the CBD could be interpreted as calling on parties to respect and preserve the traditional knowledge and practices of indigenous and local communities when implementing mitigation and adaptation measures, as well as involving those communities in climate-

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[8] Doelle, *Linking the Kyoto Protocol and Other Multilateral Environmental Agreements…*, supra note 7, at 85-86; see Hondas, supra note 7, at 16 and fn. 45.

[9] Harro van Asselt, *Managing the Fragmentation of International Environmental Law: Forests at the Intersection of the Climate and Biodiversity Regimes*, at 18 (2010), available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1703186. Climate change is indeed listed among the drivers of biodiversity loss in CBD and UNEP-WCMC, *Global Biodiversity Outlook 3*, at 22 (2010), available online at: http://gbo3.cbd.int/ [hereinafter, GBO 3].

[10] CBD Art. 6(b) reads: "Each Contracting Party shall, in accordance with its particular conditions and capabilities:… Integrate, as far as possible and as appropriate, the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies."

[11] CBD art. 14(1)(a) reads: "Each Contracting Party, as far as possible and as appropriate, shall:… Introduce appropriate procedures requiring environmental impact assessment of its proposed projects that are likely to have significant adverse effects on biological diversity with a view to avoiding or minimizing such effects and, where appropriate, allow for public participation in such procedures."

[12] CBD art. 8(l) reads: "Each Contracting Party shall, as far as possible and as appropriate: …Where a significant adverse effect on biological diversity has been determined pursuant to Article 7 [titled Identification and Monitoring], regulate or manage the relevant processes and categories of activities."

[13] CBD Art. 10(b) reads: "Each Contracting Party shall, as far as possible and as appropriate:…Adopt measures relating to the use of biological resources to avoid or minimize adverse impacts on biological diversity."

[14] CBD art. 8(h) reads: "Each Contracting Party shall, as far as possible and as appropriate: … Prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species;

[15] CBD Art. 10(e) reads: "Each Contracting Party shall, as far as possible and as appropriate:… Encourage cooperation between its governmental authorities and its private sector in developing methods for sustainable use of biological resources."

[16] CBD art. 11 reads: "Each Contracting Party shall, as far as possible and as appropriate, adopt economically and socially sound measures that act as incentives for the conservation and sustainable use of components of biological diversity."

change-related decision-making and rewarding them for their intellectual contribution to mitigation and adaptation measures.[17]

As to international synergies, Article 5 of the CBD invites parties to cooperate through competent international organizations on matters of mutual interest for the conservation and sustainable use of biodiversity, which may well include climate-related issues.[18] Furthermore, CBD Article 22(1)[19]—the "reverse conflict clause"—has been interpreted as giving "conditional priority" to CBD parties' obligations arising from other treaties existing at the time of the conclusion of the CBD, but only in the absence of a serious threat or damage to biodiversity.[20] While the wording of this clause has been criticized for being ambiguous,[21] or even "legally minimal and practically non-existent",[22] the fact that the provision is placed in the operative part of the CBD is significant in that, as opposed to being just a standard of interpretation as in the case of similar provisions placed in the preamble of other international agreements, it embodies a "substantive standard of conduct incumbent upon State Parties."[23] In so doing, the clause leaves a wide margin of discretion to CBD parties in determining the circumstances in which the CBD should take precedence over other international agreements.[24] In my opinion, therefore, Article 22(1) can be interpreted not only as authorizing CBD parties to exceptionally give precedence to their international obligations arising from the CBD over those of other international agreements existing at the time of the conclusion of the CBD in those specific instances in which a serious threat of damage to biodiversity has been identified, but also, implicitly, to be constantly alert to, and promptly identify, such a threat to biodiversity when it materializes. For present purposes, Article 22(1) may be interpreted as limiting the choice of climate responses under the UNFCCC on the part of CBD parties, when those measures may cause a serious threat to biodiversity. Based on a literal interpretation of Article 22(1)'s reference to "existing agreements", however, this constraint would not apply to CBD parties in the context of the Kyoto Protocol.[25]

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[17] CBD art. 8(j) reads: "Each Contracting Party shall, as far as possible and as appropriate: … Subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices." For a discussion of the evolution of the interpretation of this provision by CBD parties, see Elisa Morgera and Elsa Tsioumani, *The Evolution of Benefit-sharing: Linking Biodiversity and Community Livelihoods*, 15 Review of European Community and International Environmental Law 150 (2010).

[18] Jacquemont and Caparrós, supra note 7, at 179.

[19] Which reads: "The provisions of this Convention shall not affect the rights and obligations of any Contracting Party deriving from any existing international agreement, except where the exercise of those rights and obligations would cause a serious damage or threat to biological diversity."

[20] Pavoni, supra note 5, at 655.

[21] Ibid.

[22] Doelle, supra note 7, at 86.

[23] Pavoni, supra note 5, at 658, referring, however, to other international agreements.

[24] Jacquemont and Caparrós, supra note 7, at 178.

[25] Doelle, supra note 7, at 86. *Contra* the applicability of CBD Art. 22(1) to the UNFCCC because the latter "was not effective international law when the CBD entered into force", see Hondas, supra note 7, fn. 47.

By contrast, the UNFCCC does not contain a relationship clause, nor does it recognize other environmental concerns in its preamble.[26] The UNFCCC, furthermore, does not explicitly link the application of the precautionary principle to potential environmental consequences or prioritize mitigation measures based on their environmental impacts.[27] This Convention does make express reference to ecosystems under the overall objective of stabilizing greenhouse gases and achieving international cooperation for the conservation of sinks and reservoirs, which has prompted one author to observe that fundamentally "the objectives of the UNFCCC and CBD can generally be said to be convergent".[28] The Kyoto Protocol does not expressly provide incentives for meeting its targets "in a manner that minimizes negative impacts on biodiversity",[29] although it does require minimization of adverse environmental impacts by one Protocol party on another, particularly on developing states.[30] It also requires the COP/MOP to assess the environmental impacts of measures taken pursuant to the Protocol.[31] It further includes a clause calling upon parties to implement policies and measures taking into account commitments under relevant international agreements.[32] This may be understood to include the CBD, notwithstanding the fact that the EU's proposal to specifically make reference to that Convention was rejected during the negotiations of the Protocol.[33] A few implicit and explicit references to biodiversity can also be found "buried"[34] in the Marrakech Accords,[35] even if these may have proven ineffective.[36]

A more versatile legal basis for ensuring synergies between the CBD and the international climate change regime is offered by general principles of international law, such as *pacta sunt servanda*[37] as well as the emerging general principle of mutual

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[26] Meinhard Doelle, *Integration among Global Environmental Regimes: Lessons Learned from Climate Change Mitigation*, *in The Future of Regime-Building in the Law of the Sea: Essays in Tribute to Douglas M. Johnston*, 63, at 75 (Aldo Chircop et al., eds., 2008); and van Asselt, supra note 9, at 30.
[27] Doelle, *Integration among Global Environmental Regimes*, supra, based on Arts. 3(3) and 4 of the United Nations Framework Convention on Climate Change, opened for signature 4 June 1992, UNTS 1771 (entered into force 21 March 1994) [hereinafter, UNFCCC].
[28] Van Asselt, supra note 9, at 17; on the basis of UNFCCC Arts. 2, 4(1)(d), 1(1) and 4(8).
[29] Doelle, *Linking the Kyoto Protocol …*, supra note 7, at 83.
[30] Doelle, *Integration among Global Environmental Regimes*, supra note 26, at 76; and van Asselt, supra note 9, at 18; based on the Protocol to the UN Framework Convention on Climate Change, opened for signature 11 December 1997, 37 ILM (1998) 22 (entered into force 16 February 2005), Art. 2(3) [hereinafter, Kyoto Protocol].
[31] Kyoto Protocol, Art. 13(4)(a); see comments by van Asselt, supra note 9, at 18.
[32] Kyoto Protocol, Art. 2(a)(ii).
[33] van Asselt, supra note 9, at 17; on the basis of Joanna Depledge, *Tracing the origins of the Kyoto Protocol: An Article-by-article Textual History*, FCCC/TP/2000/2, UNFCCC, para 87 (2000).
[34] Hondas, supra note 7, at 13.
[35] For a detailed analysis, see van Asselt, supra note 9, at 19-22; and Jacquemont and Caparrós, supra note 7.
[36] See discussion of evidence that mitigation practices under the Kyoto Protocol have been detrimental to biodiversity conservation and sustainable use by Jamie Pittock, *A Pale Reflection of Political Reality: Integration of Global Climate, Wetland and Biodiversity Agreements*, 1 Climate Law 343, at 351 and 358-361 (2010).
[37] Annalisa Savaresi, *Reducing emissions from deforestation under the UNFCCC. A new opportunity for promoting forest conservation?*, 8th Colloquium, IUCN Academy of Environmental Law, University of Ghent, Belgium, September 2010 (forthcoming as Annalisa Savaresi, *Reducing emissions from deforestation in developing countries under the UNFCCC. Caveats and opportunities for biodiversity*, 21 Yearbook of International Environmental Law 2011).

supportiveness. The latter would require, at the interpretative level, that states disqualify solutions to tensions between competing regimes involving the subordination of one regime to the other; and, at the law-making level, that states exert good-faith efforts to negotiate and conclude instruments that clarify the relationship between competing regimes, when interpretative reconciliation efforts have been exhausted.[38] While the principle of *pacta sunt servanda* would apply only to the CBD parties that are also parties to the UNFCCC and the Kyoto Protocol, the principle of mutual supportiveness, being an essential interpretative corollary of sustainable development,[39] binds also non-CBD parties.[40] This point is significant with regard to the position of the United States, as the only non-CBD party that is a UNFCCC party.

2. Mutual supportiveness and the normative activity of the CBD COP

For the purposes of applying both mutual supportiveness and, in more limited cases, CBD Article 22(1), the normative activity of the COP is highly significant in periodically crystallizing consensus in the identification of serious threats to biodiversity arising from actions pursuant to the international climate change regime that warrant synergetic responses.[41] Indeed, it has already been noted that the CBD COP has "actively sought to manage the interactions between the two regimes",[42] revealing itself as "instrumental in highlighting biodiversity concerns in UNFCCC decisions". This, however, has not been reciprocated in the practice of the international climate change regime.[43] This section will therefore run through earlier CBD COP decisions that have increasingly pointed to the need for synergies with climate change law, as well as more recent developments that led to COP 10's climate-related exploits.

In 2000, the CBD COP made first reference to climate change in the context of marine and coastal biodiversity,[44] forest biodiversity,[45] incentive measures,[46] and biological

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[38] Pavoni, supra note 5, particularly at 661-669.
[39] Ibid., at 661-662.
[40] Ibid., at 669-671, with regards to mutual supportiveness between the WTO Agreements and the CBD, based on sustainable development as a principle "internal" to the WTO system and mutual supportiveness as an emerging general principle of international law. It seems to me that similar reasoning could apply to the UNFCCC and Kyoto Protocol parties, given the references to sustainable development that can be found in the respective texts (UNFCCC Art. 3(4); and Kyoto Protocol, Arts. 2(1), 10 and 12.)
[41] In my opinion, it is, therefore, the normative activity of the COP, rather than the vague threshold that can be found in the text of the CBD Art. 22(1), that triggers the prevalence of the CBD over other obligations arising from existing international agreements (on the "poorly defined threshold" embedded in the CBD, see Pavoni, supra note 5, at 655).
[42] Van Asselt, supra note 9, at 36.
[43] The lack of cross-reference in decisions taken in the context of the international climate change regime to relevant decisions taken in the context of the CBD has been emphasized by van Asselt, note 9, at 36-37 (referring specifically to decisions on forests) and Pittock, supra note 36, at 355.
[44] Decision V/3 *Progress report on the implementation of the programme of work on marine and coastal biological diversity (implementation of decision IV/5)*, paras. 4-5, CBD (2000).
[45] Decision V/4 *Progress report on the implementation of the programme of work for forest biological diversity*, paras. 11 and 16-20, CBD (2000) [hereinafter, CBD COP Decision V/4]. Note that an earlier decision on forest biodiversity had already pointed to the need for the Rio Conventions to liaise (CBD COP Decision IV/7 *Forest biological diversity*, Annex, para. 1 CBD (1998); as highlighted by van Asselt, supra note 9, at 15.
[46] Decision V/15 *Incentive measures*, para. 6, CBD (2000).

diversity of dry and sub-humid lands.[47] It requested the CBD Subsidiary Body on Scientific, Technical, and Technological Advice (SBSTTA) to provide scientific advise, in collaboration with the UNFCCC appropriate bodies and the IPCC, on how biodiversity considerations could be integrated into the implementation of the UNFCCC and its Kyoto Protocol.[48] This led to the creation of the CBD Ad Hoc Technical Expert Group (AHTEG) on Biological Diversity and Climate Change[49] in 2001, and the publication in 2002 of the IPCC's technical paper on climate change and biodiversity.[50]

The CBD has been steadily working on climate-change-related issues since its seventh meeting in 2004,[51] when CBD parties identified the ecosystem approach as a tool to facilitate climate change mitigation and adaptation while also contributing to biodiversity conservation and sustainable use at the national level.[52] The CBD COP had clarified that the ecosystem-based approach integrates management of land, water, and living resources, and promotes conservation and sustainable use in an equitable way. At the same time, the ecosystem approach is understood to entail a social process: different interested communities must be involved through the development of efficient and effective structures and processes for decision-making and management.[53] Furthermore, a clear link exists between the ecosystem approach and the precautionary approach:[54] a precautionary approach is implemented through adaptive management[55]—responding to changing circumstances and new knowledge, as well as generating new knowledge and reducing uncertainties, thereby allowing management to anticipate and cater for change as a result of the learning process inherent in the ecosystem approach.[56]

The year 2004 is also when CBD parties agreed to explore with the COPs of the UN Convention to Combat Desertification (UNCCD) and the UNFCCC the need to develop guidance for parties in implementing activities that are mutually supportive of the objectives of the three conventions.[57] In 2008, climate change was officially sanctioned as a cross-cutting issue within the CBD, with the COP 9 request that climate change

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[47] Decision V/21 *Cooperation with other bodies*, para. 3, CBD (2000).
[48] CBD COP Decision V/4, supra note 45, paras. 11 and 16-20.
[49] SBSTTA recommendation VI/7 *Biological diversity and climate change, including cooperation with the United Nations Framework Convention on Climate Change*, para. 5, CBD (2001).
[50] IPCC Technical Paper V, *Climate Change and Biodiversity* (2002), available online at: http://www.ipcc.ch/pdf/technical-papers/climate-changes-biodiversity-en.pdf. The preface to the paper notes that the report was produced as a response to a request of the CBD SBSTTA.
[51] See CBD Secretariat, *Background to the CBD work programme on biodiversity and climate change*, at www.cbd.int/climate/background.shtml.
[52] Reliance on the ecosystem approach has been considered the "CBD-specific approach to addressing the interactions between the CBD and climate treaties" by van Asselt, supra note 9, at 37.
[53] See generally, Principles of the Ecosystem approach, in Decision V/6 *Ecosystem approach*, Annex B, CBD (2000).
[54] UNFCCC Art. 3(3); on the fact that the CBD is based on the ecosystem approach and the UNFCCC on the precautionary approach as a differentiating factor see Pittock, supra note 36, at 349; based on Rudiger Wolfrum and Nele Matz, *Conflicts in International Environmental Law*, at 119 (2003).
[55] Decision VII/11 *Ecosystem Approach*, Annex I, Principle 6, Implementation Guideline 6.2, CBD (2004).
[56] Ibid., Annotations to the Rationale of Principle 9.
[57] Decision VII/15 *Biodiversity and Climate Change*, paras. 8, 13 and 15, CBD (2004).

considerations be integrated into each work programme[58] of the CBD where relevant and appropriate.[59] COP 9 also agreed on a moratorium on ocean fertilization as a mitigation technology,[60] and tackled the negative impacts on biodiversity of biofuels.[61]

In 2009-2010, three key reports encouraged more wide-ranging negotiations on climate change issues among CBD parties. The second report of the CBD Expert Group on Climate Change not only confirmed the reciprocal interactions between biodiversity loss and climate change, but also called attention more systematically to possible negative impacts of climate change response measures on biodiversity. It noted that some renewable energy sources and geoengineering techniques can have adverse effects on biodiversity, depending on their design and implementation. The report also underscored the need to ensure that the economic and non-economic values of biodiversity and ecosystem services[62] should be taken into account when planning and undertaking climate-change-related activities; and that incentives for such activities should be carefully designed to simultaneously consider cultural, social, economic, and biophysical factors, while avoiding market distortions.[63]

The third edition of the Global Biodiversity Outlook, released in mid 2010, provided scientific evidence that the global target to significantly reduce the rate of biodiversity loss by 2010 had not been met, stressing that climate change is one of the five pressures directly driving biodiversity loss.[64] The Outlook concluded with the recommendation that the linked challenges of biodiversity loss and climate change must be addressed *with equal priority* and in close coordination, if the most severe impacts of each are to be avoided.[65] It further highlighted that "tipping points in biodiversity loss are most likely to be avoided if climate change mitigation to keep average temperature increases

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[58] The CBD had developed a plethora of work programme of a thematic or cross-cutting nature: for an overview, see CBD Secretariat, *Thematic Programmes and Cross-cutting Issues*, at www.cbd.int/programmes/.

[59] Decision IX/16 A *Biodiversity and climate change*, para. 1, CBD (2008) [hereinafter, CBD COP decision IX/16].

[60] Discussed in sections II.2 and III below.

[61] Discussed in section II.5 below.

[62] *The Millennium Ecosystem Assessment, Ecosystems and Human Well-being: Synthesis*, Island Press (2005) (www.maweb.org/en/index.aspx) is a global scientific process commissioned by the UN Secretary-General to assess the consequences of ecosystem change on human well-being. The report is noteworthy for having facilitated far-reaching global endorsement of the term "ecosystem services" as the benefits people obtain from ecosystems, such as: food, water, timber, and fibre; regulating services that affect climate, floods, diseases, wastes, and water quality; cultural services that provide recreational, aesthetic, and spiritual benefits; and supporting services such as soil formation, photosynthesis, and nutrient cycling. For a discussion of legal implications, see Elisa Morgera, *The 2005 UN World Summit and the Environment: The Proverbial Half-Full Glass*, 15 Italian Yearbook of International Law 53 (2006).

[63] UNEP/CBD/SBSTTA/14/INF/21, published as *Connecting Biodiversity and Climate Change Mitigation and Adaptation: Report of the Second Ad Hoc Technical Expert Group on Biodiversity and Climate Change*, Technical Series No. 41, at 8-14, CBD Secretariat (2009).

[64] The target was first agreed upon by the CBD COP through Decision VI/26, *Strategic Plan for the Convention on Biological Diversity*, para. 11, CBD (2002). It was subsequently endorsed by the World Summit on Sustainable Development (*Johannesburg Plan of Implementation*, UN. Doc. A/CONF.199/20, 4 September 2002), Resolution 2, Annex, para. 44), and the United Nations General Assembly (*2005 World Summit Outcome*, A/RES/60/1, 24 October 2005), para. 56).

[65] GBO 3, supra note 9, at 11 (emphasis added).

below two degrees Celsius is accompanied by action to reduce other factors pushing ecosystems towards a changed state."[66]

The Outlook also emphasized that fighting climate change is undermined by current trends in the state of ecosystems, thus calling for biodiversity mainstreaming in decision-making by governments, the private sector, and other institutions from the local to the international scale.[67] Systematic proofing of policies for their impact on biodiversity and ecosystem services was thus considered essential to ensure that climate change itself is more effectively addressed: biodiversity conservation and, where necessary, restoration of ecosystems were considered cost-effective interventions for both mitigation and adaptation purposes, with substantial co-benefits.[68] The latter finding was further confirmed by the Economics of Ecosystems and Biodiversity study, also released in 2010, which, inter alia, stressed that "green carbon" policies (that is, those focusing on terrestrial ecosystems) can be a more cost-effective way to mitigate climate change impacts than alternative options, such as carbon capture and storage. [69]

II. Climate-Change-Related Outcomes of CBD COP 10

Against this background, COP 10 addressed several interrelated climate change issues. First and foremost, CBD parties agreed on a wide-ranging decision on biodiversity and climate change, which included guidance on assessing the impacts of climate change on biodiversity, adopting an ecosystem-based approach for adaptation and mitigation, and reducing the impacts of climate change responses on biodiversity. In addition, CBD parties were able to find consensus on a moratorium on geoengineering. They further agreed on the next steps for increased cooperation between the CBD and the international climate change regime, in the context of discussions on increased cooperation among the Rio Conventions (CBD, UNFCCC, and UNCCD). COP 10 also mandated the CBD to participate in the negotiations on REDD-plus (reducing emissions from deforestation and forest degradation, conservation of forest-carbon stocks, sustainable management of forests, and enhancement of forest-carbon stocks), and provided guidance on biodiversity concerns in forest-related negotiations and actions under the international climate change regime. Furthermore, the COP made some headway on biofuels, addressing a new issue in that context in a timely manner: synthetic biology. Finally, CBD parties agreed on a variety of provisions to integrate climate change into several CBD work programmes, and considered climate change financing. The following subsections will analyse these developments in detail, in the same order in which I have listed them here.

1. The Decision on Biodiversity and Climate Change

The decision on biodiversity and climate change includes several innovative guidelines for CBD parties to assess and tackle the interactions between climate change and

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[66] Ibid., at 75.
[67] Ibid., at 13; see also 56-58.
[68] Ibid., at 83.
[69] TEEB Summary for Policymakers: Responding to the Value of Nature, at 17 (2009); available at: www.teebweb.org/.

biodiversity, and particularly relating to an ecosystem-based approach to adaptation. CBD parties committed to assessing the impacts of climate change not only on biodiversity but also on biodiversity-based livelihoods, with a view to identifying adaptation priorities. Particular attention is directed, in this respect, to livelihoods within ecosystems that have been identified as being particularly vulnerable to the negative impacts of climate change.[70] Along the same lines, CBD parties are called upon to recognize that ecosystems can be managed to limit climate change impacts on biodiversity and support people's resilience, taking into account multiple social, economic, and cultural co-benefits for local communities. Parties are also to recognise the role of areas conserved by indigenous peoples and local communities in strengthening ecosystem connectivity and resilience, with a view to supporting ecosystem services and biodiversity-based livelihoods in the face of climate change.[71] Furthermore, the decision encourages CBD parties to take a precautionary approach when considering ex situ adaptation measures, such as species relocation, assisted migration, and captive breeding, to avoid unintended ecological consequences, such as the spread of invasive alien species.[72] Parties are further encouraged to develop strategies for biodiversity conservation and sustainable use in areas that are becoming accessible to new uses as a consequence of climate change; to take specific measures for species that are particularly vulnerable to climate change, including migratory species; and to maintain genetic diversity in the face of climate change.[73]

In terms of mitigation, the decision encourages parties to implement ecosystem-based management activities as a contribution towards achieving the objectives of the Rio Conventions, as well as the Ramsar Convention on Wetlands of International Importance.[74]

On reducing the biodiversity impacts of mitigation and adaptation measures, CBD parties are called upon to use strategic environmental assessments and environmental impact assessments to facilitate the consideration of all available options, with a view to avoiding negative impacts on biodiversity and the provision of ecosystem services, as well as the conversion or degradation of areas important for biodiversity. In so doing, CBD parties are to consider traditional knowledge, including the full involvement of indigenous peoples and local communities; they are also to consider the biodiversity components that are important for conservation and sustainable use; and they are to develop ecosystem- and species-vulnerability assessments.[75] The decision also invites parties to consider the role of biodiversity and associated ecosystem services when enhancing the climate resilience of investments, projects, and programmes.[76]

Overall, the above guidance from COP 10 aims to inject a more environmentally holistic and people-centred approach into state practice in tackling climate change,

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[70] Decision X/33 *Biodiversity and climate change*, para. 8(b), CBD (2010) [hereinafter, CBD COP decision X/33].
[71] Ibid., para. 8(i)-(j).
[72] Ibid., para. 8(e).
[73] Ibid., para. 8(f)-(g).
[74] Ibid., para. 8(n).
[75] Ibid., para. 8(u)-(v).
[76] Ibid., para. 17.

through guarantees for conservation and sustainable use, the inclusion of traditional knowledge, and the involvement of communities in decision-making and implementation. At a minimum, such guidance should influence administrative practice; a lasting and more empowering effect would be achieved by reflecting it in legislation.

2. Moratorium on Geoengineering

The CBD's decision on biodiversity and climate change is also notable for containing a moratorium on geoengineering. The CBD had addressed the question of the unknown impacts of geoengineering on biodiversity for the first time only a few months before COP 10, at the May 2010 meeting of the CBD's scientific body,[77] where parties discussed whether to expand the moratorium on ocean fertilization adopted in 2008.[78] It became immediately clear, however, that at least two fundamental differences characterized the possible role of the CBD in geoengineering, as opposed to ocean fertilization. First of all, geoengineering covers an indefinite number of possible activities, so the decision was going to be significantly broader (and possibly evolving) in scope. Second, it was far from clear which international organization(s) or process(es) were competent to deal with geoengineering, or whether they existed at all; whereas it had been clear at the time of the adoption of the ocean fertilization moratorium that the subject matter fell under the purview of the international regime on ocean dumping.[79]

During COP 10, a small group discussed geoengineering, with inputs from non-parties (notably the United States), NGOs, and research representatives.[80] The group reached consensus on the wording of a moratorium, a working definition of geoengineering, an exception for scientific research, and the need for further reflection by the international community. The compromise language was largely considered careful and balanced

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[77] Elisa Morgera, *CBD SBSTTA 14 and WGRI 3: Integration and Implementation in Focus*, 40 Environmental Policy and Law 154 (2010).

[78] CBD COP Decision IX/16 C, supra note 59, para. 4, which reads: "Bearing in mind the ongoing scientific and legal analysis occurring under the auspices of the London Convention (1972) and the 1996 London Protocol, [the COP] *requests* Parties and *urges* other Governments, in accordance with the precautionary approach, to ensure that ocean fertilization activities do not take place until there is an adequate scientific basis on which to justify such activities, including assessing associated risks, and a global, transparent and effective control and regulatory mechanism is in place for these activities; with the exception of small scale scientific research studies within coastal waters. Such studies should only be authorized if justified by the need to gather specific scientific data, and should also be subject to a thorough prior assessment of the potential impacts of the research studies on the marine environment, and be strictly controlled, and not be used for generating and selling carbon offsets or any other commercial purposes."

[79] In fact, the moratorium on ocean fertilization made explicit reference to "ongoing scientific and legal analysis occurring under the auspices of the London Convention (1972) and the 1996 London Protocol." (Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, opened for signature 29 December 1972, 1046 UNTS 120 (entered into force 30 August 1975) [hereinafter, London Convention]; and Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, opened for signature 7 November 1996, 36 ILM 1 (1997) (entered into force 24 March 2006) [hereinafter, London Protocol].

[80] Personal recollection. The author attended the CBD COP 10 and most of the preceding intersessional meetings as an observer, specifically following climate change-related negotiations.

when discussed in plenary, and no CBD party attempted to reopen the package agreed in the small-group negotiations.[81]

The wording of the moratorium can be found at paragraph 8(w) of the decision on biodiversity and climate change:[82] the COP invited parties and governments, according to national circumstances and priorities,

> to ensure, in line with decision IX/16 C on ocean fertilization, in the absence of science-based, global, transparent and effective control and regulatory mechanisms for geo-engineering, and in accordance with the precautionary approach and CBD Article 14, that no climate change-related geo-engineering activities that may affect biodiversity take place, until there is an adequate scientific basis on which to justify them and appropriate consideration of the associated risks for the environment and biodiversity and associated social, economic and cultural impacts.

While the chapeau of paragraph 8 is framed in voluntary terms (and it should be noted that that portion of the text was not negotiated in the small group), the wording of paragraph 8(w) is very clear in setting down two cumulative conditions for the lifting of the moratorium, which are to be interpreted in the light of the precautionary approach and the obligations related to impact assessment under CBD Article 14. It is worth highlighting, in this respect, that some parties initially wished to make the development of global monitoring and regulatory mechanisms for geoengineering a condition for lifting a moratorium (as in the case for ocean fertilization), but given the divergence of views on the international forum or fora that would be appropriate for this role, as well as the uncertainties as to the time such development would take, the absence of global "mechanisms" (notably, plural) was instead mentioned as an important factor in the setting up of the moratorium.

One of the most contentious issues turned out to be the delimitation of the concept of biodiversity-related geoengineering to which the CBD moratorium would apply. Divergent views surrounded the question of whether to exclude CCS from the definition of geoengineering, but this was eventually agreed to and reflected in a footnote to paragraph 8(w), which states that:

> without prejudice to future deliberations on the definition of geo-engineering activities, the COP understands that any technologies that deliberately reduce solar insolation or increase carbon sequestration from the atmosphere on a large scale that may affect biodiversity (excluding CCS from fossil fuels when it captures carbon dioxide before it is released into the atmosphere) should be considered as forms of geo-engineering which are relevant to the CBD until a more precise definition can be developed.

During the closing plenary, Bolivia wished to clarify that such exclusion was not to be interpreted as an acceptance of CCS activities under the CBD, at least until a full consideration was undertaken by the CBD COP of the impacts of CCS activities on

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[81] Personal recollection.
[82] CBD COP decision X/33, supra note 70.

biodiversity. This statement was included in the meeting's report,[83] leaving open the possibility for SBSTTA to discuss the possible impacts on biodiversity of CCS activities. In light of the inclusion of CCS under the Kyoto Protocol's Clean Development Mechanism in December 2010,[84] it has become quite unlikely that the idea of extending the moratorium to CCS may be entertained under the CBD. On the other hand, further discussions on CCS under the CBD may contribute to clarify outstanding issues under the Kyoto Protocol, in particular the environmental impacts of CCS[85] and the question of adequate restoration of damaged ecosystems and full compensation for affected communities in the event of a release of carbon dioxide from the deployment of CCS in geological formations.[86]

There is one exception to the moratorium that is made subject to detailed conditions: small-scale scientific research may be conducted in a controlled setting in accordance with CBD Article 3 if it is justified by the need to gather scientific data and is subject to a thorough prior assessment of potential impacts on the environment. The reference to CBD Article 3 (namely, states' responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or areas beyond the limits of national jurisdiction) was inserted to avoid crafting new language on the territorial scope of the moratorium.

When compared with the moratorium on ocean fertilization, the wording of the moratorium on geoengineering differs in three respects. First, it is framed in softer language (inviting, rather than requiring, parties), although, as I noted above, the chapeau to the geoengineering moratorium was not negotiated in the small group on geoengineering, and may thus not be truly reflective of the high degree of commitment that CBD parties attached to the sub-paragraph containing the geoengineering moratorium. Second, the conditions for lifting the moratorium differ: the creation of a global, transparent, and effective control and regulatory mechanism is a condition only in the case of the moratorium on ocean fertilization. Third, in the case of geoengineering, the exception for small-scale scientific research has a broader spatial scope than that on ocean fertilization: while the exception in relation to the latter is explicitly limited to "coastal waters", the exception in relation to the former does not expressly limit its geographic coverage, but rather refers to the need to ensure a "controlled setting" for all activities within the CBD parties' jurisdiction or control, if those activities may cause damage to the environment of other states or areas beyond national jurisdiction (on the basis of the reference to CBD Article 3).

Ultimately, the legal force of the geoengineering moratorium may become clear in follow-up processes or activities undertaken by CBD parties, individually or

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[83] *Report of the Tenth Meeting of the Conference of the Parties to the Convention on Biological Diversity*, UNEP/CBD/COP/10/27, para 349, CBD (2010).
[84] Decision 7/CMP.6 *Carbon dioxide capture and storage in geological formations as clean development mechanism project activities*, Kyoto Protocol (2010).
[85] Ibid., para. 1 which makes the operationalization of the decision conditional upon further negotiations to resolve Kyoto Protocol Parties' outstanding concerns identified in Decision 2/CMP.5, *Further Guidance Related to the Clean Development Mechanism*, Kyoto Protocol (2009) para. 29. I am grateful to Kati Kulovesi for drawing my attention to this point.
[86] Kyoto Protocol Decision 7/CMP.6, supra note 84, at para 3(o).

collectively, such as incorporating the moratorium in national legislation and/or allowing (or contributing to) international monitoring of geoengineering activities.[87] To this end, COP 10 complemented the geoengineering moratorium by placing follow-up discussions on geoengineering on the agenda of the CBD COP until the international community agrees on appropriate global mechanism(s) for regulating and monitoring geoengineering. The CBD Secretariat has thus been mandated to compile scientific information and the views of indigenous and local communities and other stakeholders on the possible impacts of geoengineering techniques on biodiversity; as well as associated social, economic, and cultural considerations, and options on definitions and understandings of climate-related geoengineering relevant to the CBD. The Secretariat has also been mandated to undertake a study on gaps in existing science-based global, transparent, and effective control-and-regulatory mechanisms for climate-related geoengineering relevant to the CBD, with the cautionary note "that such mechanisms may not be best placed under the Convention on Biological Diversity".[88]

3. Cooperation Among the Rio Conventions

A particularly divisive issue in the context of COP 10's decision on biodiversity and climate change (which had implications for several other issues before the COP) was the proposal for an increased and more programmatic institutional interaction among the Rio Conventions, and particularly between the CBD and the UNFCCC, given that the CBD already has a joint work programme with the UNCCD.[89]

This was not a new item on the CBD agenda. According to the CBD text, the COP is mandated to contact through the Secretariat the executive bodies of conventions dealing with matters covered by the CBD with a view to establishing appropriate forms of cooperation with them.[90] Already in 2000, the CBD Executive Secretary submitted to the UNFCCC a note outlining several impacts of mitigation measures on biodiversity.[91] In 2004, a joint paper identifying options for enhanced cooperation among the Rio Conventions[92] was drafted by Joint Liaison Group—the informal forum for exchanging information, exploring opportunities for synergistic activities, and increasing

[87] The effectives of the CBD moratorium could therefore be measured against some of the criteria that determined the success of the UN General Assembly's ban of driftnet fishing, namely continued monitoring at the international level and incorporation of the ban in national legislation: see Donald Rothwell, *The General Assembly Ban on Driftnet Fishing*, *in* Commitment and Compliance: The Role of Non-binding Norms in the International Legal System 121, at 145 (Dinah Shelton, ed., 2000).
[88] CBD COP decision X/33, supra note 70, paras. 9(n)-(o).
[89] See *Joint work programme on the biological diversity of dry and sub-humid lands between the Convention on Biological Diversity and the United Nations Convention to Combat Desertification*, UNEP/CBD/COP/7/INF/28, CBD (2004); welcomed by Decision VII/2 *The biological diversity of dry and sub-humid lands*, CBD (2004). Thanks are due to Jaime Webbe for drawing my attention to this.
[90] CBD Arts. 23(4)(h) and 24(1)(d); as highlighted by van Asselt, supra note 9, at 37, fn. 260.
[91] *Biological diversity and climate change, including cooperation with the United Nations Framework Convention on Climate Change*, UNEP/CBD/SBSTTA/6/11, CBD (2000); as discussed in Jacquemont and Caparrós, supra note 7, at 172.
[92] *Options for enhanced cooperation among the three Rio Conventions*, UNEP/CBD/SBSTTA/10/INF/9, Annex, CBD (2004); cited by van Asselt, supra note 9, at 40.

coordination among the Rio Conventions.[93] And in 2008, the CBD COP 9 encouraged the continuation of "activities that were already ongoing or had been called for by parties in the framework of the Rio Conventions", and provided an "indicative list of activities by parties to promote synergies among the Rio Conventions".[94] With a view to raising existing, ad hoc, collaboration to a more programmatic interaction with the UNFCCC, COP 10 considered a proposal for a joint work programme for the Rio Conventions.

Certain CBD parties, however, objected to the proposed joint work programme, without engaging on a principled discussion about synergies among MEAs in general or the Rio Conventions in particular.[95] Rather, they were concerned with the idea of overburdening the already crowded agenda of the UNFCCC, and particularly with the possibility that establishing a clear substantive mandate for the CBD on biodiversity-related climate change issues would compromise the delicate bargaining for a post-2012 international climate change regime by exporting issues still under negotiation at the UNFCCC to a setting where other substantive elements of the climate change negotiations are not addressed at all. In addition, other parties suspected that the proposal was mainly motivated by the desire to share in the UNFCCC's high public profile and funding.[96]

As a consequence of such divergences, CBD parties had decided already at an intersessional meeting in May 2010 to abandon substantive discussions on a proposed joint work programme among the Rio Conventions, and instead focus on the procedural steps that would be needed to ensure that the governing bodies of each of the three conventions agreed to such an endeavour.[97] Such discussions had particular visibility, given the approaching twentieth anniversary of the Rio Conference on Environment and Development and the convening in 2012 of a UN Conference on Sustainable Development (so-called "Rio+20 Summit") by the General Assembly, which is expected to assess the progress to date and remaining gaps in the implementation of the outcomes of the major summits on sustainable development.[98]

Eventually, the CBD parties at COP 10 agreed to a less ambitious plan. The COP requested the CBD Secretariat to convey a "proposal to develop *joint activities* between

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[93] The CBD website on the Joint Liaison Group can be found at: http://www.cbd.int/cooperation/liaison.shtml.
[94] CBD COP Decision IX/16 B, supra note 59, including Annexes I and II.
[95] See, for instance, *Proposal for a Systematic Approach to Coordination of Multilateral Environmental Agreements*, Open-ended Intergovernmental Group of Ministers of Their Representatives on International Environmental Governance, Second Meeting Bonn, Germany, 17 July 2001, UN Doc. UNEP/IGM/2/5, UN Environment Programme (2001); and more recently, *Nairobi-Helsinki Outcome,* Consultative Group of Ministers or High-level Representatives on International Environmental Governance, 23 November 2010, para. 7(c) (available online at: http://www.unep.org/environmentalgovernance/Portals/8/documents/Events/NairobiHelsinkifinaloutcome edited.pdf).
[96] Stefan Jungcurt, Tallash Kantai, Chad Monfreda, Elisa Morgera, Eugenia Recio, Nicole Schabus, and Elsa Tsioumani, *Summary of the tenth Conference of the Parties to the Convention on Biological Diversity*, 9:544 Earth Negotiations Bulletin, at 19-21 (2010).
[97] Morgera, *CBD SBSTTA 14 and WGRI 3*, supra note 77, at 155.
[98] A/RES/64/236, para. 20 (2010).

the Rio Conventions to their Secretariats",[99] thus abandoning the more specific idea of a joint programme. The development of "joint activities" probably would not require the conclusion of a Memorandum of Understanding among the Rio Conventions, which could have facilitated permanent institutional arrangements for the planning and monitoring of joint activities or the devising of an overall substantive framework and timeline for the selection and coherent execution of joint activities.[100]

COP 10 proceeded to lay out a series of procedural steps towards the further discussion of possible joint activities. It invited the COPs of the UNFCCC and UNCCD to collaborate with the CBD Secretariat, through the Joint Liaison Group, by considering the proposed elements on joint activities on climate change, biodiversity, land degradation, and ecosystem-based approaches to climate change mitigation and adaptation; and exploring the possibility of convening a joint preparatory meeting among the Rio Conventions on possible joint activities. The decision also points to the discussion of the joint activities in the context of the preparatory process of the Rio+20 Summit. The last step represents a concession to those parties that were hoping for a decision explicitly supporting the convening of a joint high-level session of the Rio Conventions in connection with the Rio+20 Summit. Cautions included in the text affirm the independent legal status and mandate of the Conventions, the differing membership, and the need to promote resource efficiency and avoid duplication.[101]

Notwithstanding the procedural focus of the decision, a few references to the possible substantive content of the joint activities are to be found scattered across various COP 10 decisions: the interaction between oceans and climate change is found in the decision on marine biodiversity;[102] the role of protected areas and that of dry and sub-humid lands are in the decisions on the corresponding thematic work programmes of the CBD;[103] and biodiversity concerns in connection with REDD-plus are in the decision on biodiversity and climate change itself.[104]

4. REDD-plus and Other Forest-Related Issues

Discussions on forests under the UNFCCC and Kyoto Protocol, on one hand, and the CBD, on the other, have been the original focus of debates on synergies between the two regimes,[105] and remain very contentious now that attention has turned to REDD-

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[99] CBD COP decision X/33, supra note 70, para. 13 (emphasis added).
[100] Note that such a Memorandum would not necessarily be binding: see Robin R. Churchill and Geir Ulfstein, *Autonomous Institutional Arrangements in Multilateral Environmental Agreements: A Little-Noticed Phenomenon in International Law*, 94 The American Journal of International Law 623, at 654-5 (2000).
[101] CBD COP Decision X/33, supra note 70, para. 13.
[102] Decision X/29 *Marine and coastal biodiversity*, para 77, CBD (2010) [hereinafter, CBD COP Decision X/29].
[103] Decision X/31 *Protected areas*, para 17, CBD (2010) [hereinafter, CBD COP Decision X/31]; and Decision X/35 *Biodiversity of Dry and Sub-humid Lands*, para 6, CBD (2010) respectively.
[104] CBD COP decision X/33, supra note 70, para. 10.
[105] Jacquemont and Caparrós, supra note 7. For an overview of discussions on forests in the international climate change regime, see Charlotte Streck and Sebastian Scholz, 'The role of forests in climate change', 82 *International Affairs* 861 (2006); and 3 *Climate and Carbon Law Review* (2008) (Special issue on forests).

plus.[106] Discussions at COP 10 mostly focused on the role of the CBD vis-à-vis the development and implementation of biodiversity safeguards and safeguards related to indigenous and local communities. This is certainly a critical area of potential synergies between the two international regimes,[107] in which limited progress has so far been achieved. It has been noted that it remains "unclear how the climate regime will accommodate biodiversity objectives in the design of REDD", and that references to co-benefits or safeguards in that respect signal their "lower perceived importance compared to the need to maximize the reduction of carbon dioxide emissions."[108]

As with the discussions on collaboration among the Rio Conventions, resistance at COP 10 emerged against giving a clear mandate to the CBD to have input into the ongoing negotiations on REDD-plus under the UNFCCC. This was because certain parties felt uneasy about discussing biodiversity safeguards for REDD-plus under the CBD, where other climate-related forest questions (notably LULUCF), which are instead part of the broader bargaining game in the context of the international climate change regime, were not addressed. While all parties seemed to be clear that CBD expertise is needed in REDD-plus activities, some preferred that the CBD await a decision under the UNFCCC before the two regimes liaise at the international level on matters of implementation; and others were of the opinion that influencing current negotiations is best achieved through enhanced communication between CBD and UNFCCC focal points at the level of each state.[109] The UNFCCC, in contrast, has not advised its parties to coordinate implementation of other environmental treaties through national focal points.[110]

Consensus emerged only at the ministerial consultations at the very end of COP 10.[111] The CBD Secretariat was eventually mandated, in collaboration with the members of the Collaborative Partnership on Forests,[112] to provide advice on the application (rather

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[106] For a detailed analysis of legal issues related to forest biodiversity in the context of REDD-plus, see van Asselt, supra note 9; and Savaresi, supra note 37.

[107] Albeit not the only one: Savaresi, supra note 37, also identifies the question of definitions and funding as critical for ensuring synergies between the biodiversity and climate change regimes.

[108] van Asselt, supra note 9, at 24-25; where he notes that according to Decision 2/CP.13 *Reducing emissions from deforestation in developing countries: approaches to stimulate action*, Annex, para. 8, UNFCCC (2007), REDD demonstration activities "should be consistent with sustainable forest management, noting inter alia the relevant provisions of…the Convention on Biological Diversity;" and Decision 4/CP.15 *Methodological guidance for activities relating to reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries*, preamble, UNFCCC (2009), notes "the importance of promoting sustainable management of forests and co-benefits, including biodiversity, that may complement the aims and objectives of national forest programmes and relevant international conventions and agreements."

[109] Jungcurt et al, supra note 96, at 20.

[110] Pittock, supra note 35, at 355.

[111] Jungcurt et al, supra note 96, at 19.

[112] The Collaborative Partnership on Forests is a voluntary arrangement among fourteen international organizations and secretariats with substantial programmes on forests: namely, the Food and Agriculture Organization of the UN (FAO), the Centre for International Forestry Research (CIFOR) of the Consultative Group on International Agricultural Research, the International Tropical Timber Organization (ITTO), the Rio Conventions, the Global Environment Facility, the UN Development Programme, the UN Environment Programme, the UN Forum on Forests, the World Bank, the World

than the definition) of relevant safeguards for biodiversity, for approval at CBD COP 11, based on consultations with CBD parties and the participation of indigenous and local communities. That aims to ensure that actions under the international climate change regime are consistent with the CBD's objectives, thereby avoiding negative impacts on biodiversity. At the same time, COP 10 cautioned against a preemption of future decisions under the UNFCCC.[113] The COP further requested the CBD Secretariat, once again in collaboration with the Collaborative Partnership on Forests, to identify possible indicators to assess the contribution of REDD to reaching the CBD's objectives, in addition to assessing potential mechanisms to monitor impacts on biodiversity, again without preempting any future decision taken under UNFCCC.[114] CBD parties were called upon to take into account the need to ensure the full and effective participation of indigenous and local communities, both at the level of policy-making and at the level of implementation of REDD-plus, and to consider land ownership and tenure issues, in accordance with national legislation.[115]

The Cancun Climate Change Conference, held in December 2010, adopted a decision on REDD-plus containing reference to biodiversity safeguards. It mentioned that REDD activities should take into account the multiple functions of forests and other ecosystems, be consistent with the conservation of biodiversity, and not be used for the conversion of natural forests; rather they should incentivize the protection and conservation of natural forests and ecosystem services.[116] The decision did not expressly mention the CBD's guidance or role, although this cannot be taken as definite signal of the insignificance of the CBD's new mandate on REDD-plus safeguards in the context of the international climate change negotiations.[117] The UNFCCC COP mandated its Subsidiary Body for Scientific and Technological Advice to develop guidance on providing *information* on how safeguards are being "addressed and respected"[118]—a weaker initiative than that proposed by the CBD COP of developing *indicators* to assess the actual contribution of REDD-plus to the CBD's objectives.

While much effort at the CBD COP 10 went into defining the role of the CBD in the application and monitoring of biodiversity safeguards for REDD-plus, other forest-related issues were also addressed that are relevant from a climate law perspective.

Bank, the International Union for Conservation of Nature (IUCN), and the World Agroforestry Centre (ICRAF). See the Partnership website at: http://www.fao.org/forestry/cpf/44935/en/.

[113] CBD COP decision X/33, supra note 70, para. 9(g)

[114] Ibid., para. 9(h).

[115] Ibid., para. 8(q).

[116] Decision -/CP.16 *Outcome of the work of the Ad Hoc Working Group on long-term Cooperative Action under the Convention*, III.C *Policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries***,** and Annex I at 1(d) and 2(e), UNFCCC (2010); advance unedited version available at: http://unfccc.int/files/meetings/cop_16/application/pdf/cop16_lca.pdf.

[117] Savaresi, supra note 37, notes that there was very little time between the CBD COP 10 and the Cancun Climate Change Conference, for the latter to incorporate the latest developments under the CBD into the draft text on REDD-plus that had been the subject of long-standing negotiations under the UNFCCC.

[118] UNFCCC Decision -/CP.16 *Outcome of the work of the Ad Hoc Working Group on long-term Cooperative Action under the Convention*, supra note 116, Annex II, (b) – emphasis added. For a discussion, see Savaresi, supra note 37.

First, according to the decision on forest biodiversity, joint activities between the Secretariats of the CBD and the UN Forum on Forests include climate-change-related language; for example, continued capacity-building on how forest biodiversity and climate change could be better addressed in national biodiversity and forest policies and in sustainable forest-management practices, with the caution that parties need to take into account current discussions under the UNFCCC without pre-empting decisions taken in that forum. Another item of relevance is work on forest genetic diversity with a view to addressing climate change and maintaining the resilience of forest ecosystems.[119]

Second, COP 10 provided parties with guidance applicable to all forest-related activities for mitigation purposes. CBD parties were called upon to prioritize the use of native communities of tree species and limit the degradation and clearing of primary and secondary forests in the context of an ecosystem-based approach to mitigation.[120] They were also encouraged, when designing, implementing, and monitoring afforestation, reforestation, and forest-restoration activities, to consider conservation of biodiversity and ecosystem services by converting only low-biodiversity value or degraded lands, avoiding invasive alien species, and strategically locating afforestation activities within the landscape to enhance connectivity and increase the provision of ecosystem services within forest areas.[121]

Overall, notwithstanding significant resistance to discussing REDD-plus outside the more complex negotiations under the UNFCCC, these developments under the CBD provide, on the one hand, a path for international cooperation on forests, biodiversity, and climate change, with a view to ensuring environmental sustainability in a holistic way, both within and without the international climate change regime. On the other hand, the guidelines to CBD parties provide pragmatic suggestions, aimed to ensure the mutually supportive implementation of the obligations of the CBD and of the international climate change regime, whether existing or under development.

5. Biofuels

Discussions on biofuels have been notoriously difficult within the CBD because of the entrenched positions of biofuel-importing and biofuel-exporting countries about a possible normative role for the CBD.[122] COP 10 was no exception.

In 2008, the CBD COP decided to integrate the issue of biofuel production and use into the CBD work programme on agricultural biodiversity.[123] It also agreed that biofuel production and use should be sustainable in relation to biological diversity, recognizing

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[119] Decision X/36 *Forest Biodiversity*, para. 5, CBD (2010).
[120] Ibid., para. 8(o)
[121] Ibid., para. 8(p).
[122] Asheline Appleton, Claudio Chiarolla, Twig Johnson, Harry Jonas, Stefan Jungcurt, and Marie-Annick Moreau, *Summary of the second meeting of the Ad hoc Open-ended Working Group on Protected Areas and the thirteenth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice of the Convention on Biological Diversity*, 9:427 Earth Negotiations Bulletin, at 8 (2008).
[123] Decision IX/1 *In-depth review of the programme of work on agricultural biodiversity*, para. 31, CBD (2008).

the need to promote the positive—and minimize the negative—impacts of biofuel production and use on biodiversity and on the livelihoods of local and indigenous communities. To this end, it called for the full and effective participation of indigenous and local communities in the implementation of activities relevant to the sustainable production and use of biofuels. With particular regard to the need to adopt appropriate policy frameworks to ensure the sustainability of biofuel production and use, the COP identified a series of international standards developed by the CBD in the context of precautionary and ecosystem-based approaches that CBD parties and other governments should take into account.[124] These guidelines were extended by COP 9 to the production and use of biomass for energy, in particular large-scale or industrial production and use, with a view to avoiding or minimizing negative impacts on forest biodiversity and on indigenous and local communities.[125]

In 2010 discussions centered on the possible development by the CBD of a "toolkit", for voluntary use, consisting of available standards and methodologies to assess direct and indirect effects and impacts on biodiversity of biofuel production and use, as well as impacts on biodiversity that would affect socio-economic conditions, food security, and energy security.[126] Delegates eventually agreed to request the CBD Secretariat to limit itself to analysing "*information on tools* for voluntary use".[127] The language is quite obscure and represents a midway solution that arguably allows the CBD to continue with normative work on biofuels while suggesting that the outcome of that exercise would simply be a useful input for parties involved in normative work on biofuels in other fora (such as the Global Bionergy Partnership[128]).

The COP did make some progress, however, in tackling the question of land security and other social issues linked to biofuels and biodiversity, by including in the understanding of "biodiversity-related socio-economic conditions that could be impacted on by biofuel production and use" not only food and energy security but also "the consideration of land tenure and resource rights, including water, where relevant for the CBD implementation, and in particular the implications for indigenous and local

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[124] Decision IX/2 *Agricultural biodiversity: biofuels and biodiversity*, paras. 1-3, CBD (2008) [hereinafter, CBD COP Decision IX/2]. Relevant guidelines were listed in the decision, namely: the Addis Ababa Principles and Guidelines on Sustainable Use (Decision VII/12 *Sustainable Use (Article 10)*, CBD (2004)); the work programme on protected areas (Decision VII/28 *Protected Areas (Articles 8 (a) to (e))*, CBD (2004)); the work programme on traditional knowledge (CBD, Art. 8.(j) and Decision V/16 *Article 8(j) and related provisions*, CBD (2000)); the Akwé: Kon Voluntary Guidelines for the conduct of cultural, environmental and social impact assessment regarding developments proposed to take place, or which are likely to impact on sacred sites, and lands, and waters traditionally occupied or used by indigenous people and local communities (CBD COP Decision VII/16F *Article 8(j) and related provisions*, CBD (2004)); the Global Strategy for Plant Conservation (Decision VI/9 *Global Strategy for Plant Conservation*, CBD (2002)); the guiding principles on alien invasive species (Decision VI/23 *Alien species that threaten ecosystems, habitats or species*, CBD (2002)); the application of sustainable forest management and best agricultural practices in relation to biodiversity; national biodiversity strategies and action plans; and relevant guidance developed under the Cartagena Protocol on Biosafety.

[125] CBD COP Decision IX/2, para. 2(b).

[126] Jungcurt et al, supra note 96, at 22.

[127] Decision X/37 *Biofuels and biodiversity*, para. 11 (emphasis added), CBD (2010) [hereinafter, CBD COP Decision X/37].

[128] The website of the partnership can be found at: http://www.globalbioenergy.org/.

communities".[129] The COP thus called on parties to put in place policies, supportive measures, environmentally sound technologies, and impact assessments to minimize negative impacts on such broadly defined biodiversity-related socio-economic conditions. It also called upon parties to assess and address direct and indirect land-use and water-use changes affecting areas of high value for biodiversity and areas of cultural, religious, and heritage interest and indigenous and local communities.[130] The COP further urged parties and others to ensure that the sustainable agricultural practices, and food and energy security of indigenous and local communities are addressed and respected, subject to national legislation, taking into account communities' customary laws where applicable.[131]

A third area of contention in the discussions on biofuels concerned the possible recommendation to develop inventories of critical ecosystems and areas important to indigenous and local communities that would become "no-go areas" for biofuel production.[132] The COP eventually agreed to invite governments and relevant organizations to develop national inventories of areas of high biodiversity value, critical ecosystems, and areas important to indigenous and local communities, that could be "used in, or exempted from," biofuel production.[133] It is unclear whether this exercise will support biodiversity protection, or whether it goes beyond a business-as-usual planning and zoning exercise. It may even be interpreted as undermining area-based efforts to protect biological diversity, as was highlighted by the Dominican Republic's representative, who requested that the COP 10 report reflect that country's concern that about including in inventories whole ecosystems for the purposes of biofuel production, arguing that this may increase the likelihood of destroying ecosystems because of biofuels production.[134]

The most significant biofuel-related development at COP 10 was the consensus that emerged on a highly novel and contentious issue—synthetic biology. This was addressed for the first time in the context of the CBD in May 2010, at the initiative of the Philippines.[135] Following intense negotiations, COP 10 agreed to urge governments to apply the precautionary approach to the release of synthetic life, cells, or genomes into the environment, acknowledging the parties' entitlement, in accordance with domestic legislation, to prevent such release.[136] The COP also mandated the CBD scientific body to consider information submitted by parties on this matter at its next meeting,[137] with a view to providing guidance and clarity on synthetic biology.[138] This

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[129] CBD COP Decision X/37, supra note 127, para. 2.
[130] Ibid., paras. 6 and 8-10.
[131] Ibid, para. 4.
[132] Jungcurt et al, supra note 96, at 22.
[133] CBD COP Decision X/37, supra note 127, para. 7.
[134] *Report of the Tenth Meeting of the Conference of the Parties to the Convention on Biological Diversity*, supra note 83, para. 381.
[135] Asheline Appleton, Johannes Gnann, Elisa Morgera, Anne Roemer-Mahler, and Tanya Rosen, *Summary of the fourteenth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice to the Convention on Biological Diversity*, 9:514 Earth Negotiations Bulletin, at 18 (2010).
[136] CBD COP decision X/37, supra note 127, para. 16.
[137] Decision X/13 *New and emerging issues*, para. 4, CBD (2010).
[138] CBD COP decision X/37, supra note 127, para. 17.

decision therefore places this novel matter on the CBD's agenda, cautioning parties to exercise restraint until guidance is developed within the CBD's framework.

It may be concluded from the recent negotiations on biofuels under the CBD that while several parties wish to limit the scope of the CBD's normative work on biofuels, the CBD COP has showed capacity to make progress on the politically charged question of land tenure and resource rights, as well as its readiness to tackle emerging issues such as synthetic biology in this context, thereby demonstrating the importance of its specialized contribution in the context of the other relevant international processes.

6. Mainstreaming Climate Change in the CBD Work Programmes

Climate change was also discussed in the context of a series of thematic work programmes of the CBD, with a view to increasing the positive and reducing the negative impacts of climate change—and of responses to climate change—on specific types of biodiversity. Relevant text is dispersed across COP decisions: what follows is therefore a compilation of relevant extracts, that have been systematized so as to clearly differentiate the expected contribution to national action as opposed to international cooperation, while reflecting the occasionally vague or repetitious language that was agreed upon.

In its decision on mountain biodiversity, the COP basically provided guidance to parties as to the application of the ecosystem-based approach to mitigation and adaption in mountain areas. The COP thus encouraged adaptation and mitigation by conserving in situ and ex situ genetic resources and species currently and potentially under threat from climate change, reducing deforestation, restoring degraded mountain-forest ecosystems, and conserving carbon in mountain soil. COP 10 also supported policies reducing the impact of climate change on mountain biodiversity and related traditional knowledge, enhancing resilience, and addressing unsustainable agricultural practices. It encouraged research and monitoring networks on the impacts of climate change in mountain regions. More concretely, it recommended environmental and strategic assessment of renewable energy planning as a part of mitigation strategies in mountain areas, for the purpose of reducing their impact on mountain biodiversity.[139]

The decision on inland water biodiversity comprises both guidance to parties and suggestions for improved international cooperation. As to the former, the COP encouraged parties to maintain or restore the connectivity of inland water ecosystems with terrestrial and marine ecosystems in order to adapt to adverse impacts of climate change and minimize biodiversity degradation.[140] The COP also urged parties and others to ensure that their climate change mitigation and adaptation activities are designed and implemented while taking into account the needs and opportunities to sustain or enhance the services provided by inland water ecosystems and thereby contribute to the improvement of human well-being; and to take into account the adaptation and mitigation capacities of wetlands when planning mitigation and

[139] Decision X/30 *Mountain biological diversity*, para. 5, CBD (2010).
[140] Decision X/28 *Inland waters biodiversity*, paras. 10(l) and 26(c), CBD (2010).

adaptation measures.[141] In terms of international synergies, COP 10 urged recognition of the interdependence of the carbon and water cycles in adaptation and mitigation measures, and invited the relevant UNFCCC bodies to consider the issue of reducing emissions from degradation and loss of wetlands.[142]

The decision on marine and coastal biodiversity included guidance to parties, as well as suggestions for improved international cooperation on climate change. First, COP 10 reiterated the moratorium on ocean fertilization in accordance with Decision IX/16 C.[143] Then, it identified areas for research and international cooperation through the convening of joint expert-review processes with the UNFCCC, the Food and Agriculture Organization, and other relevant organizations, to monitor and assess the impact of ocean acidification on marine and costal biodiversity, as well as the convening, in collaboration with the UNFCCC, of an expert workshop on the role of marine and coastal biodiversity and ecosystems in adaptation and mitigation. It also recommended the identification of current scientific and policy gaps in the promotion of the sustainable management of natural carbon sequestration services of marine and coastal biodiversity, the increase in the resilience of these ecosystems through protected areas, and the avoidance of potential adverse impacts on marine and coastal biodiversity from human responses to climate change.[144]

In terms of guidance to parties, COP 10 proposed to further integrate climate-change-related aspects of marine and coastal biodiversity into relevant national strategies, action plans, and programmes, as well as into the design and management of marine and coastal protected areas.[145] It invited parties, other governments, relevant organizations, and indigenous and local communities to address climate change adaptation and mitigation issues by highlighting the role and potential of marine and coastal ecosystems, such as coral reefs and estuaries, and habitats such as tidal salt marshes, mangroves, and sea grasses; by identifying and addressing the underlying drivers of marine and coastal ecosystem loss and destruction, and improving the sustainable management of coastal and marine areas; and by enhancing efforts to increase the resilience of coastal and marine ecosystems, through, inter alia, establishing marine protected areas.[146] It suggested addressing the climate-change-related aspects of marine and coastal biodiversity, including the potential adverse impacts of ocean acidification; and it supported the avoidance to the extent possible of potential adverse impacts on marine and coastal biodiversity of other human responses to climate change.[147] COP 10 further called on parties, other governments, and organizations to incorporate emerging knowledge on ocean acidification into relevant (biodiversity, coastal management, and marine protected area) planning; and to incorporate climate change impacts and

[141] Ibid., paras. 26(a)-(b) and 27.
[142] Ibid., para. 29.
[143] CBD COP Decision X/29, supra note 102, paras. 13(e) and 58. Note that the moratorium was also confirmed in CBD Decision X/33, supra note 70, para. 8(x).
[144] CBD COP Decision X/29, supra note 102, paras. 66, 77 and 8(b).
[145] Ibid, para. 7.
[146] Ibid., para 8.
[147] Ibid., para. 13(d) and (f).

ecosystem-based adaptation into development and disaster-reduction planning, particularly in coastal areas.[148]

The decision on protected areas included a significant climate change component. In terms of guidance to parties, COP 10 recommended identifying areas that are important for mitigation and adaptation purposes, through carbon sequestration and maintenance of carbon stocks, while recognizing that biodiversity conservation remains the primary objective; undertaking joint planning of protected-area networks and of mitigation and adaptation measures; and considering climate change adaptation in assessing the management effectiveness of protected areas.[149] The COP also invited parties to integrate protected areas into wider landscapes, seascapes, and sectors, including through the use of connectivity measures and the restoration of degraded habitats and landscapes, in order to address climate change impacts and increase resilience to climate change; enhance scientific knowledge, as well as traditional and indigenous knowledge, to support the development of adaptive-management plans and to improve management effectiveness of protected areas for addressing impacts from climate change on biodiversity; and evaluate and recognize the value and the benefits of comprehensive, effectively managed, and ecologically representative protected-area systems in climate change adaptation and mitigation.[150] In terms of international synergies, the CBD COP invited the UNFCCC COP to consider the role of protected areas as an effective mechanism to build the resilience of vulnerable communities and ecosystems, with the appropriate social and biodiversity safeguards.[151]

Climate change was also discussed in the context of international synergies on agricultural biodiversity: as a result, there is now a proposal for the second phase of the joint workplan between the CBD and the FAO Commission on Plant Genetic Resources for Food and Agriculture to include, inter alia, the sustainable use of agricultural biodiversity, in particular underutilized crops, wild relatives of cultivated plants, and other potential food sources, to address the impacts of climate change.[152] And in the decision on invasive alien species, COP 10 recognized the critical importance of regional collaboration to address the threat of invasive alien species, particularly as a means to enhance ecosystem resilience in the face of climate change. Parties also requested the CBD Secretariat to distribute existing information (including guidelines on invasive alien species, possible examples of their management, and related management responses) balancing the need for adaptation of biodiversity and ecosystems to climate change with the need to prevent and minimize the risks of existing and potential invasive alien species.[153]

Finally, climate change was also firmly embedded in the 2011-2020 Strategic Plan, which serves as the overarching framework for coordinating all CBD activities and for inspiring action by parties and stakeholders. This marks a departure from the past, as the

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[148] Ibid., paras. 67 and 77.
[149] CBD COP Decision X/31, supra note 103, paras. 14(d) and (f), and 19(c).
[150] Ibid., para. 14(a)-(c).
[151] Ibid., para. 16.
[152] Decision X/34 *Agricultural biodiversity*, para. 5(a), CBD (2010).
[153] Decision X/38 *Invasive alien species*, para. 9(a), CBD (2010).

previous strategic plan merely mentioned climate change as an obstacle to the implementation of the CBD's objectives.[154] Target 10 of the new plan provides that by 2015, the multiple anthropogenic pressures on coral reefs and other vulnerable ecosystems impacted on by climate change or ocean acidification will be minimized, so as to maintain their integrity and functioning. Target 15 provides that by 2020 ecosystem resilience and the contribution of biodiversity to carbon stocks will have been enhanced through conservation and restoration, including restoration of at least fifteen per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.[155] In addition, in assessing the lessons learnt from missing the 2010 global target on biodiversity loss, COP 10 underlined the need to place greater emphasis on the restoration of degraded terrestrial, inland water, and marine ecosystems, with a view to enhancing the resilience of ecosystems and contributing to climate change mitigation and adaptation.[156] The climate-change-related targets in the 2011-2020 Strategic Plan may thus contribute to monitoring progress in addressing biodiversity loss and climate change in a mutually supportive way in the immediate future.

Although the scattered guidance to parties that emerges from the above overview of COP 10 decisions is far from being effectively communicated, taken as a whole these decisions do provide further specific avenues for international synergies, with and without the international climate change regime, as well as a wealth of practical ideas for parties to holistically address climate change and biodiversity. The latter could influence ongoing legislative initiatives for the "climate-proofing" of environmental law,[157] particularly through integrated planning and impact assessments, that incorporate the values of biodiversity and ecosystem services, support the restoration of degraded ecosystems and the connectivity of protected areas, and ultimately contribute to ecosystem resilience and human well-being.

7. Funding

Mainstreaming climate change in the work of the CBD, with the additional projected activities by parties and the Secretariat, inevitably raised the question of funding, also in light of the conclusion of the third Global Biodiversity Outlook that action to implement the CBD has been held back by insufficient financial resources.[158] The opportunities that climate financing promised for biodiversity-related work were thus another key theme at COP 10.

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[154] Decision VI/26 *Strategic Plan for the Convention on Biological Diversity*, Appendix, at 8(a), CBD (2002); see comments by Pittock, supra note 36, at 363.
[155] Decision X/2 *The Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets*, CBD (2010).
[156] Decision X/4 *Third Edition of the Global Biodiversity Outlook: Implications for the future implementation of the Convention*, para. 6, CBD (2010) [hereinafter, CBD COP Decision X/4].
[157] See, for instance, two ongoing legal research projects: Environmental Law Institute, New Approaches for Conserving Biodiversity: Adapting Law and Governance to a Changing Climate, at: http://www.eli.org/program_areas/climate_biodiversity.cfm; and IUCN, Increasing Legal Capacity and Enhancing Integration in Biodiversity and Climate Change Adaptation at National and International Levels, at: www.adaptationlaw.org.
[158] CBD COP Decision X/4, supra note 156, para. 4.

In terms of international synergies, attention focused on the role of the Global Environment Facility (GEF) as the financial mechanism of the CBD and the UNFCCC. CBD parties recognized the importance of improving the provision of financial support for biodiversity conservation and sustainable use as part of a portfolio of climate change measures, and invited the GEF to consult with the CBD on ways to enhance cooperation among the Rio Conventions.[159] Guidance to the GEF included a section on climate change and biodiversity emphasizing projects that demonstrate the role that protected areas play in addressing climate change; synergy-oriented programmes to conserve and sustainably manage all ecosystems that also contribute to poverty eradication; and projects related to ecosystem conservation, restoration of degraded lands and marine environments, and overall ecosystem integrity, that take into account climate change impacts.[160] Parties further requested the CBD Executive Secretary, in collaboration with the GEF, to identify indicators to measure and facilitate reporting on the achievement of social, cultural, and economic benefits for biodiversity, climate change, and combating desertification; and to develop tools to evaluate and reduce the negative impacts of mitigation and adaptation activities on biodiversity.[161] In addition, CBD parties called upon the UNFCCC COP to support projects related to adaptation and mitigation in protected areas, so as to ensure that national mitigation and adaptation actions that involve expansion of protected-area networks can receive financial and technical assistance through climate-related financial mechanisms.[162]

Further guidance was also provided for national action. Through the decision on protected areas, the COP invited CBD parties to explore how funding opportunities under adaptation and mitigation strategies could contribute to the implementation of the CBD work programme on protected areas while enhancing co-benefits for biodiversity, adaptation, and mitigation; and to finance the conservation and management of protected-area systems in contributing to carbon sequestration and maintenance of carbon stocks, as well as to ecosystem-based approaches to adaptation. Given concerns that the search for climate funding may detract from biodiversity-focused management, however, cautionary language was added on recognizing that biodiversity conservation remains the primary objective of protected-area systems. Parties were further called upon to link improved design and management approaches for comprehensive and integrated protected-area systems (including buffer zones, corridors, and restored landscapes) into national strategies and action plans for addressing climate change.[163] In addition, the decision on biodiversity and local authorities encouraged CBD parties to engage and link subnational governments and local authorities and their networks to new and innovative financial mechanisms being discussed and formulated in relation to climate change, payments for ecosystem services, and enhanced efforts to reduce emissions from deforestation and forest degradation.[164] Lastly, the CBD Resource Mobilization Strategy invited parties, relevant organizations, and initiatives such as the

[159] CBD COP decision X/33, supra note 70, paras. 4 and 6.
[160] Decision X/24, *Review of guidance to the financial mechanism*, Annex, section 4.23, CBD (2010).
[161] Decision X/25 *Additional guidance to the financial mechanism*, para. 22, CBD (2010).
[162] CBD COP decision X/31, supra note 103, para 16.
[163] Ibid., paras. 15 and 14(e).
[164] Decision X/22 *Plan of Action on Subnational Governments, Cities and Other Local Authorities for Biodiversity*, para. 13(b), CBD (2010).

World People's Conference on Climate Change and the Rights of Mother Earth, to submit information concerning innovative financial mechanisms with potential to generate new and additional financial resources as well as possible problems that could undermine the achievement of the Convention's objectives.[165]

These discussions were characterized by developing-country parties' position to ensure that separate streams of new and additional funding are maintained to fulfill the objectives of the CBD and UNFCCC. Thus developing countries expressed skepticism at the attempts to divert attention from obtaining biodiversity-focused funding by making use of climate funding for biodiversity co-benefits, or more generally by making increasing reference to innovative financing mechanisms. In this respect, the proposed creation of a "green development fund" under the CBD, to be modelled on the Clean Development Mechanism and reward trade-certified "land areas managed in compliance with the CBD",[166] was abandoned as the draft decision on innovative financial mechanisms was withdrawn during the final plenary.[167] Developing countries further ensured that reference was made to the need for innovative financial mechanisms to be considered supplementary, and not replaceable with, the CBD financial mechanism.[168]

On the other hand, developed countries, particularly the EU,[169] were keen to take advantage of the possibility to use climate funding for biodiversity-related objectives, particularly in the light of the chronic problem of sustainable funding for protected areas. While this may be a key element for the mutually supportive implementation of the CBD and the international climate change regime, the possible difficulties of matching conditions for climate funding with the specificities of biodiversity conservation were not discussed in this context. In particular, there was no discussion as to whether additionality (the fact that a project must lead to emissions reductions that are additional to any occurring in the absence of the project), as a condition for CDM

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[165] Decision X/3 *Strategy for resource mobilization in support of the achievement of the Convention's three objectives*, para. 8(c), CBD (2010) [hereinafter, CBD COP decision X/3].
[166] Jungcurt et al, supra note 96, at 27. The proposal was included in *Draft decision submitted by the Chair of Working Group II: Policy Options Concerning Innovative Financial Mechanisms* UN Doc. UNEP/CBD/COP/10/WG.2/L.46, para. 5, CBD (2010) (available at: www.cbd.int/cop10/insession). For the details of the proposed green development fund, see *The GDM 2010 Initiative Report*, UN Doc UNEP/CBD/COP/10/INF/15, CBD (2010).
[167] *Report of the Tenth Meeting of the Conference of the Parties to the Convention on Biological Diversity*, supra note 83, para. 213; and Jungcurt et al, supra note 96, at 13-14.
[168] CBD COP decision X/3, supra note 165, fourth preambular paragraph. This reflects more general opposition to innovative funding mechanisms by developing countries: see, for instance, General Assembly Resolution "Keeping the promise: united to achieve the Millennium Development Goals", A/65/RES/1, paras. 61-62 (2010).
[169] See Environment Council Conclusions, "EU and global vision and targets and international ABS regime", 16 March 2010, available at: http://register.consilium.europa.eu/pdf/en/10/st07/st07536.en10.pdf, para 19, indicating that "public and private finance, including innovative forms of financing, and finance associated with the Copenhagen Accord on climate change, should - based on appropriate criteria - include scope for payments for ecosystem services, where appropriate, including for both adaptation and mitigation, and should specifically support conservation and sustainable use of biodiversity within REDD-plus, as appropriate, through the implementation of negotiated safeguards."

funding[170] (and possibly, future carbon trading-related funding opportunities),[171] would be satisfied in the context of protected-area systems. This is because the first step in checking whether the additionality condition is met is to identify alternatives for the project activity that are consistent with the host country's laws and regulations.[172] It would thus be difficult to prove additionality in the context of protected areas that may already be backed up by existing legislation—although additional climate-related benefits would nonetheless be derived from the project if relevant laws were better implemented or existing protected areas were restored or better connected one with the other.[173]

III. PRELIMINARY ASSESSMENT

Climate change has effectively become a key cross-cutting component in the work of the CBD in two respects: as a threat to biodiversity (the negative impacts of climate change, and of climate responses, on biodiversity and the livelihood of communities); and as a response that contributes to biodiversity conservation and sustainable use (mitigation and adaptation measures with biodiversity co-benefits).[174] Thus, the impacts of climate change and of responses to climate change that pose significant threats to biodiversity are now set to be addressed across the board of CBD activities, as are the opportunities for mitigation and adaptation measures to act as a new powerful vehicle for the application of the ecosystem approach.

Climate change considerations can be thus expected to significantly shape the immediate future of the CBD: they have the potential to help establish synergies among the various thematic and cross-cutting areas of work of the CBD,[175] achieve biodiversity mainstreaming in policy and measures in which climate change is mainstreamed, and obtain additional funding for CBD implementation from climate-financing initiatives. While these reasons make the growing focus on climate change within the CBD a welcome development, doubts linger as to whether the move was motivated by opportunistic reasons.[176] Sound scientific advice is consequently needed to correctly

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[170] Kyoto Protocol, Article 5 and decision 3/CMP.1 *Modalities for the accounting of assigned amounts under Article 7, paragraph 4, of the Kyoto Protocol*, Annex, para. 43, Kyoto Protocol (2005).
[171] Although different additionality requirements could be put in place for future market mechanisms under the international climate change regime, such as in the context of REDD-plus; and that a completely different notion of "additionality" is being discussed in the context of concessional (as opposed to market-based) climate funding (that is, concessional climate funding as additional to Official Development Assistance). I am grateful to Kati Kulovesi for drawing my attention to this point.
[172] See explanation in the context of bioenergy in Elisa Morgera, Kati Kulovesi, and Ambra Gobena (Eds.), *Case Studies on Bioenergy Policy and Law: Options for Sustainability*, FAO Legislative Study No. 102 at 27-28 (FAO, 2010).
[173] I am grateful to Jaime Webbe for drawing my attention to this point. See also Appleton et al, *Summary of the fourteenth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice to the Convention on Biological Diversity*, supra note 135, at 22.
[174] I am grateful to Jaime Webbe for drawing my attention to this point.
[175] Morgera, *CBD COP 10: Towards Post-2010 Implementation*, supra note 3, above, at 154.
[176] Sikina Jinnah, *Introduction to Climate Change Bandwagoning: The Impacts of Strategic Linkages on Regime Design, Maintenance, and Death*, and Sikina Jinnah, *Marketing Linkages: Secretariat Governance of the Climate-Biodiversity Interface*, both to appear in 11 Global Environmental Politics (forthcoming August 2011).

locate climate change among the other drivers of global biodiversity loss[177] (habitat loss and degradation, pollution, species over-exploitation, and invasive alien species[178]). The forthcoming establishment of the intergovernmental science-policy platform on biodiversity and ecosystem services (IPBES),[179] which will likely be modeled after the Intergovernmental Panel on Climate Change, may help clarify this issue.

The recent developments integrating climate change into the work of the CBD also spotlight the need for the Convention to effectively and systematically synergize with other relevant international processes (not only the international negotiations on a post-2012 climate change regime, but also processes such as the ongoing and future negotiations on biofuels and geoengineering) and to impact on state practice while international mechanisms are being set in place. As it is quite difficult to determine the legal strength of CBD COP decisions on the basis of their wording,[180] it seems that the pragmatic way to determine whether these decisions actually contribute to addressing climate change and biodiversity in a mutually reinforcing manner is to assess state practice,[181] both in relevant international negotiations outside the CBD framework and in implementing CBD COP decisions at the national and local level.[182]

The 2008 moratorium on ocean fertilization provides an interesting case in point. At the international level, it was immediately taken up by the parties to the London Convention and Protocol on ocean dumping, which in 2008 adopted a non-binding resolution prohibiting ocean fertilization[183] and in 2009 began working towards an

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[177] Appleton et al, *Summary of the fourteenth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice to the Convention on Biological Diversity*, supra note 135, at 22.
[178] GBO 3, supra note 9, at 55.
[179] Decision X/11 *Science-policy interface on biodiversity, ecosystem services and human well- being and consideration of the outcome of the intergovernmental meetings*, CBD (2010); and General Assembly, A/RES/65/162 (2010).
[180] While this observation may be true in the context of other multilateral environmental agreements, it seems that the CBD COP decision-making practice makes the task particularly complex (see note 4 above). Indeed, of the authors that have discussed the legal significance of multilateral environmental agreements' COP decisions, none has referred to the specific case of the CBD: see, for instance, Churchill and Ulfstein, supra note 100; Jutta Brunnée, 'COPing with Consent: Law-making under Multilateral Environmental Agreements' 15 *Leiden Journal of International Law* 1 (2002); Annecoos Wiersema, *The New International Law-Makers? Conferences of the Parties to Multilateral Environmental Agreements*, 31 Michigan Journal of International Law 231 (2009); Malgosia Fitzmaurice, *Consent to Be Bound – Anything New Under the Sun?*, 74 Nordic Journal of International Law (2005) 483.
[181] Malgosia Fitzmaurice, *Non-Compliance Procedures and the Law of Treaties*, *in* Non-compliance Procedures and Mechanisms and the Effectiveness of International Environmental Agreements, 453, at 463-467 (Tullio Treves et al., eds., 2009), where the author discusses theories as to the legal character of COP/MOP decisions; and Rothwell, supra note 87, where the author emphasized ongoing monitoring by the UN (building not only on States' submissions but also on information provided by NGOs and international organizations) and incorporation in national legislation and policies as determinant factors of the moratorium success.
[182] The importance of national-level practice in ensuring coherence between the international obligations of the international climate change regime and of the international biodiversity law is emphasized by Doelle, *Linking the Kyoto Protocol and Other Multilateral Environmental Agreements…*, supra note 7.
[183] Resolution LC-LP.1 *on the Regulation of Ocean Fertilization*, London Convention (2008); see Elisa Morgera, *Ocean Dumping (Year in Review)*, 19 Yearbook of International Environmental Law 274, at 275-6 (2009).

assessment framework for scientific research involving ocean fertilization.[184] The dialogue between the two regimes continued into 2010, when the CBD COP promptly recognized that the work underway in the context of the London Convention and Protocol was contributing to the development of a regulatory mechanism called for in the CBD moratorium, and invited parties to act in accordance with the relevant resolution adopted under the ocean dumping regime.[185] At the national level, the CBD moratorium on ocean fertilization was the object of a dispute between the German ministries for research and for the environment, which could not agree on the legal nature of the relevant CBD decision. This ended with the German government admitting that ocean fertilization could not be accepted as a mitigation measure and that scientific projects had to comply with internationally agreed standards.[186]

In conclusion, while the CBD is engaging more and more with questions related to the linkages between climate change and biodiversity, further legal research is needed to ascertain whether the detailed guidance and tools produced under that regime have an impact beyond biodiversity-related international instruments and processes, and whether they are implemented by policymakers and managers in relevant sectors at the national level. In-depth engagement of climate and biodiversity lawyers with state practice related to the climate-related CBD COP decisions is particularly needed in light of the CBD Secretariat's "light-touch" monitoring of parties' compliance, which is a far cry from the "naming, shaming or praising" approach of other multilateral environmental agreements.[187] The ultimate value of the developments under the CBD related to climate change rests with the systematic application at all levels of environmental governance of its guidelines aimed at ensuring that climate change measures are environmentally, socially, and culturally sustainable.[188]

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[184] *Report of the 31st Consultative Meeting of the Parties to the London Convention and of the fourth Meeting of Contracting Parties to the London Protocol*, Report LC 31/15, London Convention (2009); and Elisa Morgera, *Ocean Dumping (Year in Review)*, 20 Yearbook of International Environmental Law (2010).

[185] Namely, resolution LC-LP.2(2010) *on the assessment framework for scientific research involving ocean fertilization*, London Convention (2010): see CBD COP decision X/29, para. 60.

[186] Harald Ginzky, *Ocean Fertilization as Climate Change Mitigation Measure – Considerations under International Law*, 7 Journal of European Environmental and Planning Law 57, at 57-59 and footnote 34 (2010).

[187] Pittock, supra note 36, at 363-364.

[188] See, for instance, Morgera and Tsioumani, supra note 17, at 171-172 (2010), where it is argued that guidance on benefit-sharing under the CBD can be usefully considered under the international climate change regime, particularly in the context of negotiations on REDD-plus; and reference to the CBD Article 8(j) and its Akwé: Kon Guidelines on cultural, environmental and social impact assessment in the UN-REDD Programme *Operational Guidance: Engagement of Indigenous Peoples and Other Forest Dependent Communities* (Working Document, 25 June 2009), at 5 and 14, available online at: http://www.unredd.net/index.php?option=com_docman&task=doc_download&gid=455&Itemid=53, as well as (albeit notably less prominently) in the draft UN-REDD and FCPC joint Guidelines on Stakeholder Engagement in REDD+ Readiness With a Focus on the Participation of Indigenous Peoples and Other Forest-Dependent Communities (17 November 2010), at 16 available online at: http://www.un-redd.org/Home/EngagementofIPs/tabid/1033/language/en-US/Default.aspx.